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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,539	01/27/2005	Neil Bonnette Graham	KC-0128	8512

34610 7590 01/26/2007  
FLESHNER & KIM, LLP  
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CHANTILLY, VA 20153

EXAMINER
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PALO, FRANCIS T

ART UNIT	PAPER NUMBER
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3644

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/26/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/522,539

Applicant(s)

GRAHAM ET AL.

Examiner

Francis T. Palo

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 2, 19 and 22-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-18, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of claims 1, 3-18, 20 and 21 in the reply filed on 11/6/06 is acknowledged.

The traversal is on the ground(s) that the subject matter of each of the designated inventions is sufficiently related that a thorough search for the subject matter of each of the designated inventions would encompass a search for the subject matter of the remaining designated inventions without serious burden.

This is not found persuasive because as submitted in the restriction requirement mailed 10/6/06, only one invention in each category is permitted under Rule 13.2 and 37 C.F.R. 1.475 and further, a thorough search for the subject matter of each of the designated inventions would impose a serious burden upon the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claims 2, 19 and 22-26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species and invention respectively, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in the reply filed on 11/6/06.

### ***Specification***

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors.

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 3-18, 20 and 21** are rejected under 35 U.S.C. 102(b),  
as anticipated by or, in the alternative, under 35 U.S.C. 103(a),  
as obvious over **Veronesi** FR 2406387 (1979).

The following discussions are based upon an EPO machine translation of FR 2406387.

Regarding **claim-1**:

Veronesi '387 teaches indirect irrigation of a plant placed in culture medium utilizing a hydrogel mass packed in a permeable enclosure (see '387 claims 1 and 5); poly(ethylene oxide) marketed by Union Carbide is disclosed in the first paragraph of page-2, as claimed.

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Regarding **claim-3**:

The discussion above regarding claim-1 is relied upon.

Veronesi recites in claim-1 placement of the hydrogel 'in the medium or ground of culture at a position chosen' a certain distance from the root system, which encompasses the limitations of the instant claim; also see claim-2 of the '387 patent.

Regarding **claims 4, 8 and 9**:

The discussion above regarding claim-1 is relied upon.

The rendering, swelling and water storage limitations of the hydrogel as claimed, is considered inherent to the Union Carbide product or poly(ethylene oxide) claimed and taught by Veronesi.

Regarding **claim-5**:

The discussion above regarding claim-1 is relied upon.

While Veronesi appears to be silent as to the diameter of the hydrogel particles as claimed, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have utilized hydrogel particles in the size range as claimed, as it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use, and further, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art, that is, there being no cited criticality as to the broad diameter range as claimed.

Regarding **claims 6 and 7**:

The discussion above regarding claim-1 is relied upon.

Veronesi recites in claim-7 the hydrogel contains agents and additives of any kind, as claimed.

Regarding **claims 10 and 14**:

The discussion above regarding claim-1 is relied upon.

Veronesi recites in claim-5 a permeable enclosure that does not let the hydrogel granules pass through, this teaching is taken to encompass the indefinite limitation of "rapidly" as claimed, in consideration of the swelling and moisture holding capacity and characteristics of the hydrogel.

Regarding **claims 11, 12 and 18**:

The discussion above regarding claim-1 is relied upon.

As Veronesi teaches a hydrogel contained within a permeable enclosure placed near or out of contact with roots as discussed above, the size, shapes and air water surface contact angle(s) of the bags as claimed would be encompassed by the scope of the invention, that is, optimized irrigation of plants.

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Regarding **claim-13**:

The discussion above regarding claim-1 is relied upon.

Veronesi discusses the consequence of water excess on the plant (damage), the tailoring of the hydrogel amount as claimed is encompassed by the Veronesi invention.

Regarding **claims 15-17**:

The discussion above regarding claim-1 is relied upon.

Veronesi teaches retention of the hydrogel in an enclosure but appears to be silent as to the means to that end as claimed; it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have sealed the enclosure as claimed, as those means are generally known to one skilled in the art(s).

Regarding **claims 20 and 21**:

The discussion above regarding claim-1 is relied upon.

Veronesi acknowledges the utilization of felt, fabric and wicks and further, meshes of suitable sizes but is not specific as to the materials of the bag as claimed; as these materials are known in the arts, in the absence of any stated problems solved by or any stated advantages obtained by having bags made from the six materials claimed in the instant claims, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have produced bags from the choices as claimed for the known advantages of those materials.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Arny '196 teaches dropping packages containing soil replenishment materials into furrows in the ground, said packages having an outer ply of kraft paper and being perforated and given any conventional form and further teaching various sealing means, also taught is the use of cloth bags.

Anderson '834 teaches promoting the growth and survivability of seeds and seedlings with receptacles containing active ingredients (fertilizer and hydrogel) near the roots, which burst open.

Takahashi '648A teaches a textile fabric containing a hydrogel embedded in a container.

Barclay '174A teaches a flexible walled sachet filled with hydrogel.

Baron '791 teaches an envelope of polyethylene welded at the edges containing a layer of hydrogel provided between two sheets of cellulose wadding.



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Knapp '628 and Paternoster '408 each teach an apparatus containing moisturing agents for insertion in the soil; Knapp teaches an inert dye in the gel.

Van Laere '959B1 and '659B2 teaches a pot in pot configuration having a hydrogel therebetween.

Moran '179A1 teaches a water swellable polymer under a pot.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis T. Palo whose telephone number is 571-272-6907. The examiner can normally be reached on M-Tu.,Th.-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Francis T. Palo*

Francis T. Palo  
Primary Examiner  
Art Unit 3644